



# **Department of the Navy Lean Six Sigma Way Ahead**

**Nick Kunesh**

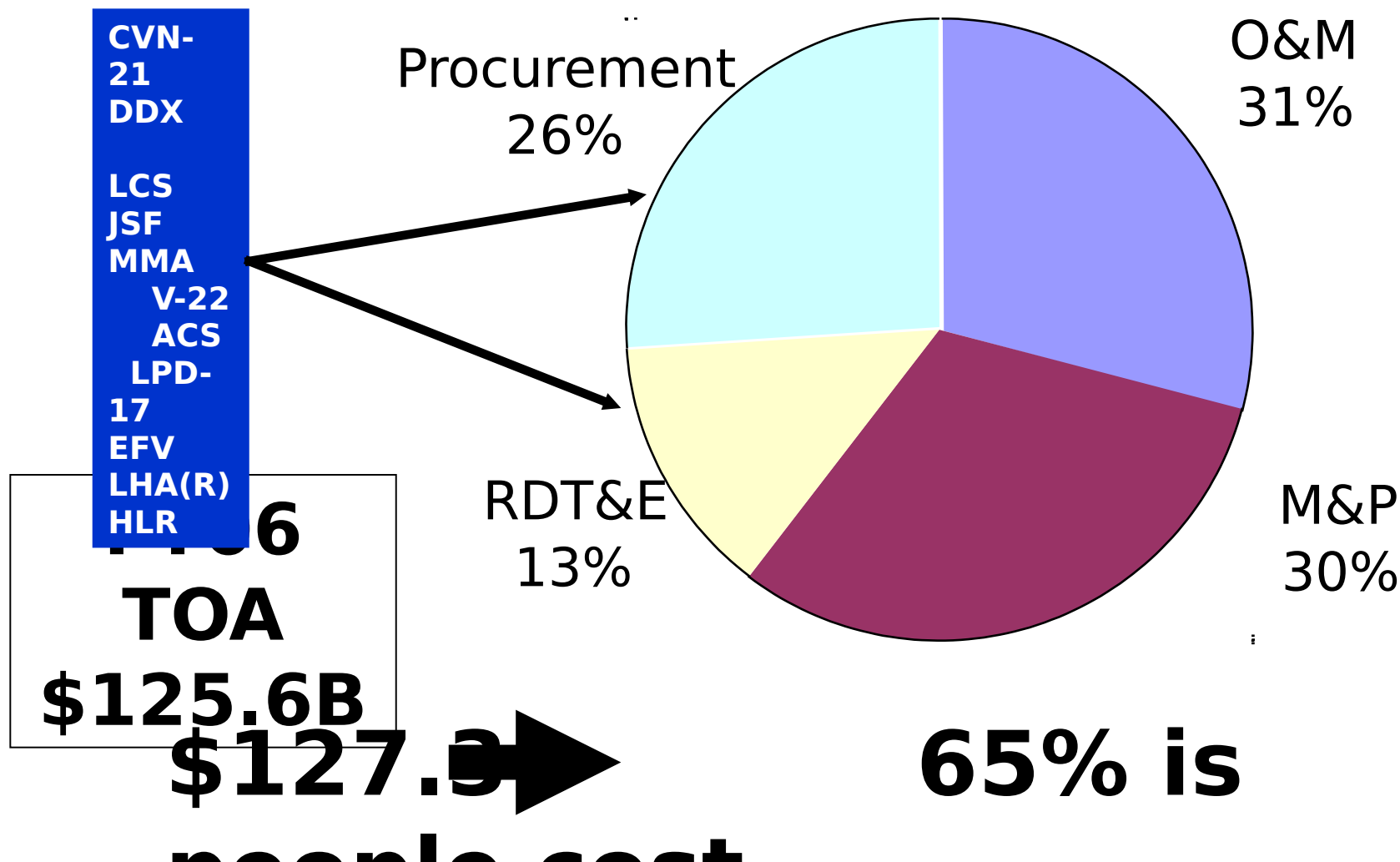
**Deputy Assistant  
Secretary of the Navy  
13 March 2007**





# DoN Total Obligation Authority (TOA)

## FY 07 DoN Budget





THE SECRETARY OF THE NAVY  
WASHINGTON, D.C. 20350-1000

May 3, 2006

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Transformation Through Lean Six Sigma

As the Secretary of the Navy, I am challenged to lead the Department in executing two great tasks simultaneously: fighting today's war and positioning our Force for an uncertain future. We face additional fiscal pressures that lead us to better stewardship of taxpayer dollars where greater efficiency leads to improved effectiveness. While in industry, I found that both buyers and suppliers who employed Lean Six Sigma (LSS) experienced better efficiencies, increased morale and higher levels of performance.

LSS is a proven business process that combines the strategies of Lean (eliminate non-value added activities and improve cycle time) and Six Sigma (reduce variation and produce highly repeatable processes). Several elements of the Navy and Marine Corps have engaged in LSS activities to include the training of over 500 Black Belts and 1,500 Green Belts that have facilitated 2,800 events and projects. These activities averaged a 4:1 return on investment. This initiative applies to entities engaged in transactional, service and support missions.

The mission is clear: creation of more readiness and assets within our budget through LSS. I expect that you, my Leadership Team, will personally support this initiative by injecting it into our performance objectives. To accomplish our goal of LSS integration, we will be educated on a broad spectrum of LSS to include framework, efficiency methodologies and tools, and accelerated change management approaches.

LSS will be deployed using a top-down approach. My leadership deployment session will be held on 15 June from 1300-1700. I ask that each of you participate in the deployment session. The objective for this meeting is to: establish a common knowledge baseline among participants; review examples of successful commercial implementations; assess current LSS implementation in the Department; and establish the next steps toward more fully employing LSS in our organization.

A handwritten signature in black ink, appearing to read "D. Winter", is positioned above the printed name.

Donald C. Winter



# **SECNAV**

## **Lean Six Sigma Deployment Session**

**27 June 2006**

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**SECNAV**

**Under SECNAV**

**ASN (RD&A)**

**ASN (FM&C)**

**DCMC (M&RA)**

**NAVSEA**

**NAVSUP**

**SPAWAR**

**N4B**

**DASN (Logistics)**

**DASN (Environment)**

**GC**

**DNS**

**CNO**

**ACMC**

**ASN (M&RA)**

**ASN (I&E)**

**DCMC (I&L)**

**NAVAIR**

**NAVFAC**

**N1**

**N80**

**DASN (RDT&E)**

**ADC (P&R)**

**BUMED**

**CNI COO**





# DoN Lean Six Sigma Three Year Action Plan

Phase I Year 1 CY06	Phase II Year 2 CY07	Phase III Year 3 CY08
<b>Leadership</b>		
<ul style="list-style-type: none"> <li>• Leadership Kick-off and monthly progress meetings</li> <li>• Balance process metrics across DoN objectives &amp; goals</li> <li>• Plan for XX% reduction in overhead through CY08</li> <li>• NSPS SES / Flag fitness report bullet that recognizes LSS contributions</li> <li>• Accelerate the journey for those who have started (AIRSpeed, Task Force Lean, et. al.) and report out financial results</li> <li>• Start the journey with enabling service, support and transactional functions (i.e., FIN, HR, SC, IT, etc)</li> </ul>	<ul style="list-style-type: none"> <li>• Take XX% of overhead cost out of the Department</li> <li>• Accelerate integration w/ industrial base and be accountable for financial harvesting</li> <li>• Re-align to DoN 07 objectives &amp; goals, and measure LSS output to DoN 06 objectives and goals</li> <li>• All military and civilian performance evaluations and fitness reports recognize LSS contributions</li> </ul>	<ul style="list-style-type: none"> <li>• Take an additional XX% of overhead cost out of the Department</li> <li>• Re-align to DoN 08 objectives &amp; goals, and measure LSS output to DoN 07 objectives and goals</li> <li>• Accelerate Enterprise maturity</li> </ul>
<b>Work Product</b>		
<ul style="list-style-type: none"> <li>• High impact core value streams are identified, mapped, and all applicable personnel are prepared to DMAIC</li> <li>• Accelerate Integration of organic Supply &amp; Industrial Base with external suppliers (i.e., private industry, DLA)</li> <li>• Identify where LSS applies to the Warfighter (i.e., war-game planning &amp; events)</li> <li>• Identify and clean legacy data bases for conversion to Navy ERP</li> </ul>	<ul style="list-style-type: none"> <li>• High impact core value streams are DMAIC</li> <li>• Continuous Improvement of those activities that started before Jan 06</li> <li>• 100% of all major Defense contracts awarded to industry will contain a LSS incentive clause</li> <li>• Introduce Malcolm Baldrige criteria</li> </ul>	<ul style="list-style-type: none"> <li>• High impact core value streams are revisited</li> <li>• Service, support and transactional functions are in a Continuous Improvement closed loop</li> <li>• 25% of extended (with industry) value chains have been leaned out</li> </ul>
<b>Education and Training</b>		
<ul style="list-style-type: none"> <li>• 1,000 Black Belts certified</li> <li>• 2,000 Green Belts certified</li> <li>• 25% of GS-15 /06 and above complete Champion training</li> <li>• Synchronize LSS training body of knowledge and training methods across the DoN</li> <li>• Incorporate initial LSS training into all training</li> </ul>	<ul style="list-style-type: none"> <li>• 1,000 additional Black Belts</li> <li>• 4,000 additional Green Belts</li> <li>• 100% of GS-15 /06 and above complete Champion training</li> <li>• Optimize LSS training across enterprise; BB/GB factory; (incorporate into 5 vector model)</li> </ul>	<ul style="list-style-type: none"> <li>• Train additional Black Belts equal to 1% of affected workforce</li> <li>• Train additional Green Belts equal to 4% of affected workforce</li> <li>• 100% of GS-15 / 06 and above are LSS Champions</li> <li>• 5% of GS-15 / 06 and above are Green Belt certified</li> </ul>

## **Phase I Year 1 CY06**

### **Leadership**

- **Leadership Kick-off and monthly progress meetings**
- **Balance process metrics across DoN objectives & goals**
- **Plan for XX% reduction in overhead through CY08**
- **NSPS SES / Flag fitness report bullet that recognizes LSS contributions**
- **Accelerate the journey for those who have started (AIRSpeed, Task Force Lean, et. al.) and report out financial results**
- **Start the journey with enabling service, support and transactional functions (i.e., FIN, HR, SC, IT, etc)**

### **Work Product**

- **High impact core value streams are identified, mapped, and all applicable personnel are prepared to DMAIC**
- **Accelerate Integration of organic Supply & Industrial Base with external suppliers (i.e., private industry, DLA)**
- **Identify where LSS applies to the Warfighter (i.e. war-game planning & events)**
- **Identify and clean legacy data bases for conversion to Navy ERP**

### **Education and Training**

- **1,000 Black Belts certified**
- **2,000 Green Belts certified**
- **25% of GS-15 /06 and above complete Champion training**
- **Synchronize LSS training body of knowledge and training methods across the DoN**

**Phase II Year 2  
CY07**

**Leadership**

- **Take XX% of overhead cost out of the Department**
- **Accelerate integration w/ industrial base and be accountable for financial harvesting**
- **Re-align to DoN 07 objectives & goals, and measure LSS output to DoN 06 objectives and goals**
- **All military and civilian performance evaluations and fitness reports recognize LSS contributions**

**Work Product**

- **High impact core value streams are DMAIC**
- **Continuous Improvement of those activities that started before Jan 06**
- **100% of all major Defense contracts awarded to industry will contain a LSS incentive clause**
- **Introduce Malcolm Baldrige criteria**

**Education and Training**

- **1,000 additional Black Belts**
- **4,000 additional Green Belts**
- **100% of GS-15 /06 and above complete Champion training**
- **Optimize LSS training across enterprise; BB/GB factory; (incorporate into 5 vector model)**

## **Phase III Year 3 CY08**

### **Leadership**

- **Take an additional XX% of overhead cost out of the Department**
- **Re-align to DoN 08 objectives & goals, and measure LSS output to DoN 07 objectives and goals**
- **Accelerate Enterprise maturity**

### **Work Product**

- **High impact core value streams are revisited**
- **Service, support and transactional functions are in a Continuous Improvement closed loop**
- **25% of extended (with industry) value chains have been leaned out**

### **Education and Training**

- **Train additional Black Belts equal to 1% of affected workforce**
- **Train additional Green Belts equal to 4% of affected workforce**
- **100% of GS-15 / 06 and above are LSS Champions**
- **5% of GS-15 / 06 and above are Green Belt certified**





THE SECRETARY OF THE NAVY  
WASHINGTON, D. C. 20350-1000

AUG 15 2006

MEMORANDUM FOR UNDER SECRETARY OF THE NAVY  
CHIEF OF NAVAL OPERATIONS  
COMMANDANT OF THE MARINE CORPS  
ASSISTANT SECRETARIES OF THE NAVY  
GENERAL COUNSEL OF THE NAVY

SUBJECT: Transformation Through Lean Six Sigma – Round One

The recent reviews of your respective organization's process on implementing Lean Six Sigma was most helpful. While you and your organizations are at different levels of comfort and maturity, I found that certain of my comments and observations were repeated often enough to warrant proper documentation. Most of these recommendations revolve around the need to develop a project portfolio and a cadre of trained personnel who can carry out the selected projects.

Project Portfolio Mix - Build a portfolio of projects and start your journey with those that are of short duration and easy to accomplish, the "low hanging fruit." This will provide some "quick wins," promote confidence in applying LSS tools, and *build momentum*. In parallel, identify, and begin to meter in your High Impact Core Value Streams. Keep in mind the four broad goals: speed of decisions, transactions and paperwork; increase in quality of work life; reduction in overhead costs; and safety related to adherence of standard operating procedures and cleanliness. There are aspects of your portfolios that should address work product within the confines of your day to day staff activities, and areas that you affect on a national basis.

People Investment - Selection of people must be responsive to the project areas you will be engaged in. Identify the most appropriate SMEs to undergo Green Belt or Black Belt training, and insure that those SMEs arrive at training with a project in hand, engage *immediately* after graduation, and personally monitor progress. Set a leadership example by becoming a Green Belt and undertaking a project yourself. Eventually, project completion output will replace your initial metrics related to capacity to conduct projects. I encourage you to benchmark organizations that started the journey to understand their lessons learned.

I look forward to another round of discussions in the next four to six weeks and trust that there will be more fidelity in your respective POA&Ms.

Donald C. Winter

# SECNAV's Guidance for Senior Executive's Performance

## Align Leadership Expectations With Workforce Accountabilities



THE SECRETARY OF THE NAVY  
WASHINGTON, D.C. 20350-1000

DEC 20 2006

MEMORANDUM FOR CHIEF OF NAVAL OPERATIONS  
COMMANDMENT OF THE MARINE CORPS  
ASSISTANT SECRETARIES OF THE NAVY  
GENERAL COUNSEL OF THE NAVY  
ASSISTANT FOR ADMINISTRATION IN THE OFFICE OF  
THE UNDER SECRETARY OF THE NAVY

SUBJECT: FY 2007 Strategic Performance Assessment for Senior Executives in the  
Department of the Navy

The performance of Senior Executives of the Department of the Navy is evaluated based on the progress that their organizations make toward accomplishing the priorities of the Department. Annually, the Department of the Navy (DON) sets goals and objectives for completion which align to the priorities of the President and the Department of Defense. The initiatives identified in the President's Management Agenda (PMA), the decisions of the 2006 Quadrennial Defense Review (QDR), and specific actions listed in DON Objectives define a large part of the focused efforts for FY2007. Internal strategic guidance also exists to direct DON efforts in other vital areas, not covered in these three overarching documents.

The President directed his Administration to embrace business improvements. DON has made considerable progress incorporating these improvements into DON business practices. I value leaders who reap the long-term benefits that can result from further progress of these PMA initiatives:

- Strategic Management of Human Capital
- Competitive Outsourcing
- Improved Financial Performance
- Budget and Performance Integration
- Expanded Electronic Government

Implementation of the decisions of the 2006 QDR merits close tracking and careful attention. Establishing the basis for victory against global terrorism remains our chief aim. Re-orienting the capabilities of the Department toward future threats, reshaping the Defense Enterprise, and developing the 21<sup>st</sup> Century Total Force all require direct and timely DON action. I value leaders who will deliver solutions to DoD challenges at best cost.

The 2007 DON Objectives capture the core efforts of where the Commandant of the Marine Corps, the Chief of Naval Operations, and I intend to focus our attention: providing a capable and optimized workforce, delivering the Navy-Marine Corps force

for tomorrow, emphasizing ethics and safety, and most importantly, aggressively prosecuting the Global War on Terror. I value in particular the progress made in accomplishing the goals we have set before the Department, expressed in these DON Objectives.

In addition to being engaged in combat operations, the Navy and Marine are transforming to meet future challenges. I value leaders who can be change agents for this move away from a Cold War structure and can build a naval force that addresses the uncertainties of the future.

I value the strategic leaders who are skilled in building insightful metrics for determining the value of our efforts. Special recognition goes out to leaders who can put metrics in place to indicate how effectively and efficiently our money is spent and how well it connects to our organizational priorities. Those who can base wise decisions for scarce resources on the outcome of their metrics, I prize most highly.

I value leaders who can use Lean Six Sigma initiatives to further propel these improvements. I also value leaders who can successfully cascade this higher level guidance into the goals of their lower echelon organizations.

Finally, I intend to use this framework at the end of the fiscal year to shape Senior Executive Performance Assessment. Exemplary progress is expected of all leaders in the Department. The accomplishments of exceptional leaders will be recognized.

Donald C. Winter

## SECNAV Values Leaders Who...

- Excel At Business / Process Improvement
- Deliver Solutions At Best Cost
- Are Change Agents
- Lead Based On Insightful Metrics
- Use LSS To Improve
- Cascade / Measure SECNAV Guidance Penetration Throughout Organizations



# **Focus on Execution**

**Each objective will be pursued using discrete, measurable goals. The accountable Executive Agent is listed:**

**“Develop effective business strategies for the day-to-day management of Navy processes through the use of Lean Six Sigma and other business practices (DNS)”**

**The Director of Navy Staff will develop an execution plan for the achievement of this objectives within 60 days.**

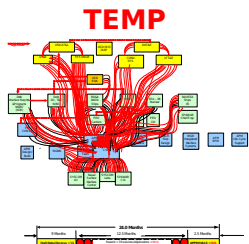
# **Lean Six Sigma Improvements for CVN-21 Milestone B**







# CVN-21's Milestone B Documentation Effort



**7 CVN-21 MS B documents analyzed:**

**Man-hours expended: 245,742**

➤ **Total cost: \$18.4M**

**Total review touch points: 6,952**

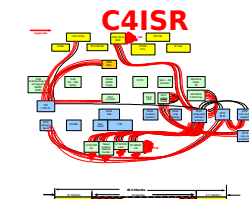
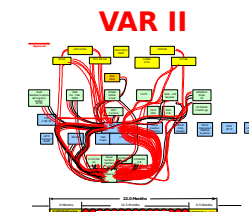
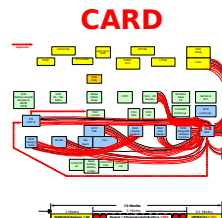
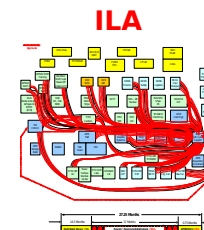
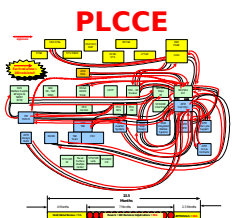
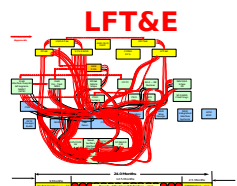
➤ **Non value add (NVA) touch points: 6,654**

➤ **56 different organization 'touch-points'**

➤ **Average number of organizations touched per document = 22**

➤ **NVA cost: \$11.171M (96%)**

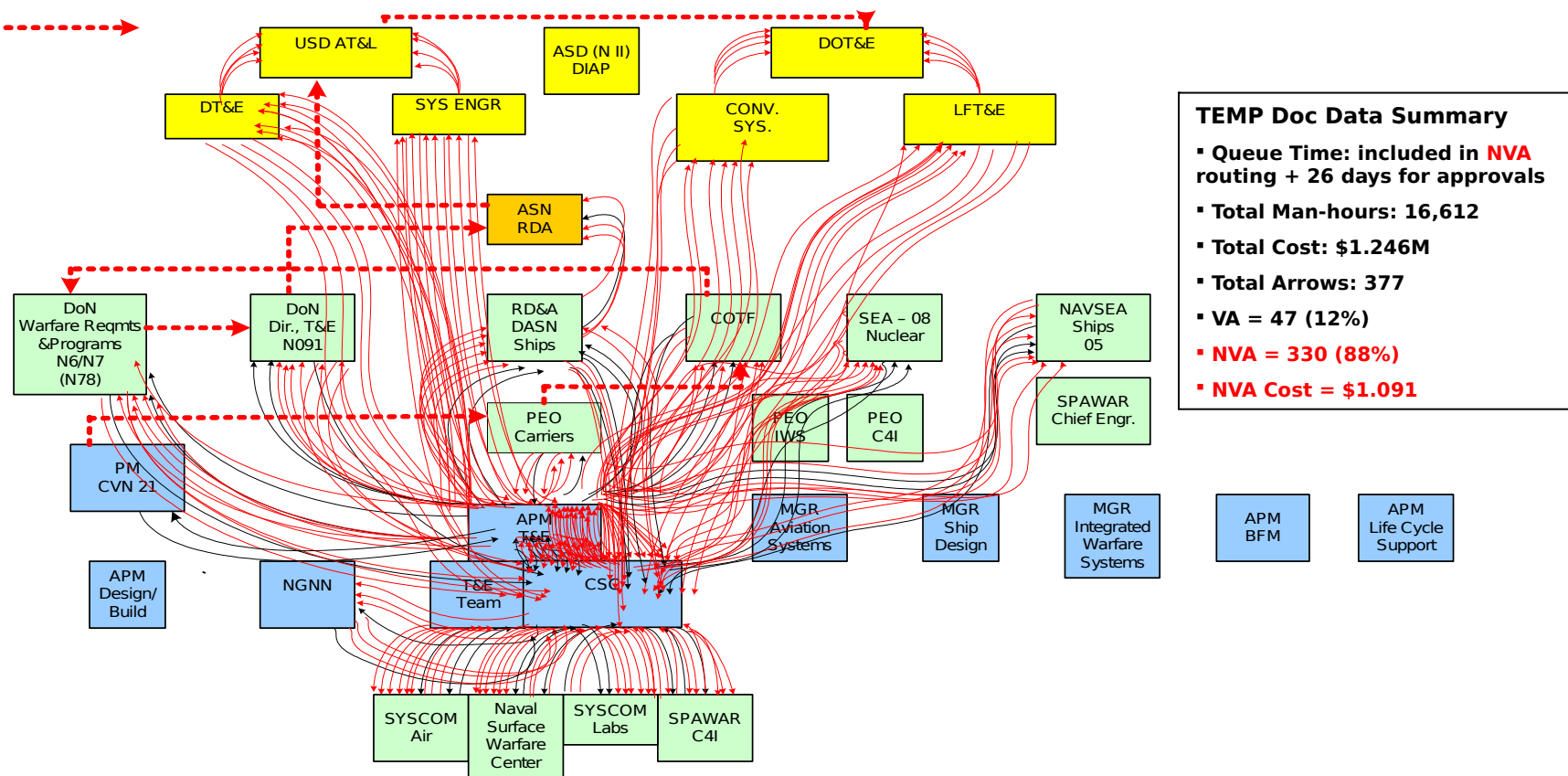
➤ **NVA man-hours: 148,939**



**m's Perspective \$11.17M NVA touch poi**



# CVN-21's Milestone B TEMP Time and Motion Study



Note: Arrows represent review loops, red are non value added, black are value



# **MALS-31 Beaufort Ordnance Support Equipment Work Centers Processes**

**Theory of Constraints (TOC) and LEAN**

## **Goal: Reduce Time to Reliably Replenish (TRR)**

### **Prior to CPI Analysis**

- **1,100 Non-Ready For Issue (NRFI) aviation ordnance support equipment (Aug 05)**
- **Average TRR for 71C was 125 days (Oct 04)**
- **Average TRR for 71D was 90 days (Oct 04)**
- **Travel to Ordnance center six miles**



### **Current CPI State (Aug 06)**

- **Less than 200 NRFI aviation ordnance support equipment**
- **Average TRR for 71C is 6 days, with a goal of 5 days**
- **Average TRR for 71D is 12 days, with a goal of 5 days**
- **Reduced travel to Ordnance center to 25 feet**

- **Co-located upstream node (Supply Department) with Ordnance to reduce TRR**
- **Established buffers at the Supply satellite site and Ordnance to reduce variability**
- **Redesigned Ordnance work spaces to ensure quick turn around**
- **Reduced number of steps for pulling parts and publications**





# Justification and Approval (J&A) Process

## Rapid Improvement Event

**Goal: Reduce J&A flow time and rework; increase review time flexibility**

### **Current State Analysis**

- 41 day average flow time
- 51 Hand offs
- 1% first pass yield
- 40% submitted electronically
- Five serial reviews



### **Future State Solution**

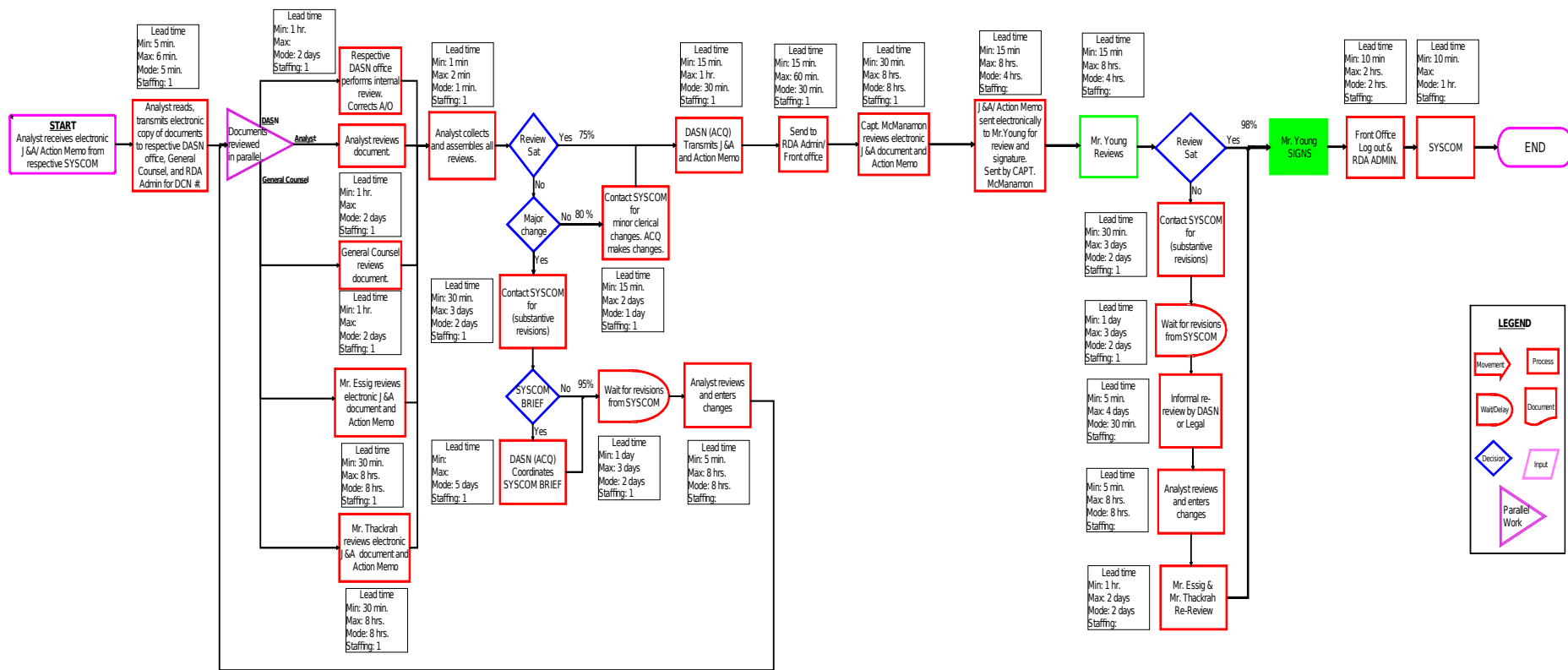
- 5.4 day average flow time
- 11 Hand offs
- 74% first pass yield
- 100% submitted electronically
- Three serial reviews

- Streamlined process
- Increased automation -all reviews electronic --instant receipt notification
- Reduced serial reviews / rework
- Content requirements communicated to SYSCOM; submittal templates created



# Justification and Approval (J&A) Process

## Rapid Improvement Event/Value Stream Mapping

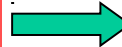


# BFMC Lean Pilot Solution Outcome

## Reimbursable Funding Documents to NAVAIR Field Activities

### Pre-VSA State

- 30 plus steps (all serial)
- 16 queues
- 8 work-arounds
- Multiple hard copies
- 12 review and approval steps
- 28 day average processing time



### Current State Solution

- 15 steps (4 performed concurrently)
- 4 queues
- No work-arounds
- Fewer hard copies
- 5 review and approval steps
- 4 day average processing time

- Moved downstream activities up front
- Brought all parties to table - expanded IPT
- Removed WAIT time (queues)
- Ensured complete and accurate product early
- Reduced rework/rejects
- Leveraged ERP ensuring all financial links match project plan to performing activity

Goal: Streamline and reduce costs of summer hire p

## Pre-VSA State

- 4,000 man hours expended to execute process
- 24 Process Steps
- 70 day Process Cycle Time
- \$12.8K per recruit
- Voice of Customer not identified



## Current State

- 1,000 man hours expended to execute process
- 4 process Steps
- 45 day Process Cycle Time
- \$2.4K per recruit
- Voice of Customer integrated

***Savings: One man-year in labor, faster, simpler, customer friendly***



# SECNAV Congressional Response Process

## Kaizen Project

### Problem/Goal Statement

**Problem:** Currently Department of Navy Congressional Responses are not meeting internal Navy cycle time requirements of 7 work days and the quality of the responses is not consistent. SECNAV has established the ASN (I&E) project as a prototype for replication purposes. Since the beginning of 2006, the mean ASN (I&E) Process Cycle Time has been 17.8 work days.

**Scope:** The scope of this project will include the response categories of: Congressional Constituent, Congressional Member of Congress.

**Goal:** Decrease the mean Process Cycle Time from 17.8 to 7 work days.

### Business Impact

- Financial Impact
  - Type I Savings - none anticipated at this time
  - Type II Savings - TBD
- Non-Quantifiable Benefits
  - Better customer relations with Congress

### Core Team

• Dr. Donald Winter Owner/Green Belt		Project Sponsor/Process
• CDR Jim Aiken		Deployment Champion
• Phil Zalesak		Black Belt
• Steve Bonacorsci		Master Black Belt
<u>Core Team</u>	<u>Role</u>	<u>LSS Training</u>
• LT Ball	SME	Yellow Belt
• Catherine Timco	SME	Yellow Belt
• YN1 Suggs	SME	Yellow Belt
• Alan Anglin	SME	Yellow Belt
• Jim Ives	SME	Yellow Belt
• Denise Brown	SME	Green Belt
• Oral John	SME	Green Belt

#### Extended Team

- TBD (ASN I&E)

### Timeline

<u>Event</u>	<u>Date</u>
• Initial tasking	7/6
• Scoping	7/17 - 8/23
• Kaizen preparation	8/24 - 9/9
• SECNAV Brief	9/12
• Kaizen	9/18 - 9/21
• Implementation	10/2

# Backup